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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,076	11/28/2001	David J. Koenig	1094.199US1	1096

7590 06/04/2003

Schwegman, Lundberg, Woessner & Kluth, P.A.
P.O. Box 2938
Minneapolis, MN 55402

EXAMINER

TRAN, DALENA

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,076

Applicant(s)

KOENIG ET AL.

Examiner

Dalena Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 71-118 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. The election of claims 1-70 has been considered.

Thus, claims 1-70 are pending.

Claims 71-118 have been withdrawn due to the non elected claims.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, and 7-8, are rejected under 35 U.S.C. 102(b) as being anticipated by Slavik (4,617,472).

As per claim 1, Slavik discloses a power control system for a recreational vehicle comprising: a connector adapted for receiving electrical current from a source of shore power, the connector for connecting the recreational vehicle to the source of shore power, setting an electrical system not to exceed the sensed available amount of shore power (see columns 1-2, lines 55-15; and column 3, lines 39-65), and a sensor for automatically determining the available level of shore power input to the recreational vehicle (see columns 3-4, lines 66-63; and columns 8-9, lines 18-7).

As per claim 7, Slavik discloses a control system for a plurality of devices in a vehicle, the control system comprising a network having a first and second node associated with a first and second device of a plurality of devices (see columns 2-3, lines 15-2), and a microprocessor

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for running a set of commands to control the first and second device, wherein the network control electrical loads (see columns 9-10, lines 66-25).

As per claim 8, Slavik discloses the network controls the sources of electrical energy (see column 9, lines 20-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4, are rejected under 35 U.S.C.103(a) as being unpatentable over Slavik (4,617,472) in view of Parks et al. (6,504,339).

As per claims 3-4, Slavik does not disclose a rechargeable power source. However, Parks et al. disclose a rechargeable power source wherein the amount of current used to recharge the rechargeable power source is automatically adjusted based on the amount of available shore or gen. power (see the abstract; and columns 3-4, lines 46-65), and the rechargeable power source includes a battery (see columns 2-3, lines 43-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik by combining a rechargeable power source wherein the amount of current used to recharge the rechargeable power source is automatically adjusted based on the amount of available shore or gen. power for providing sufficient power to charge the battery.

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6. Claims 9-43,45-52,54-58,60,62-64,67, and 69-70, are rejected under 35 U.S.C.103(a) as being unpatentable over Slavik (4,617,472), and Parks et al. (6,504,339) as applied to claim 3 above, and further in view of Wagner et al. (6,055,163).

As per claims 9-11, Slavik, and Parks et al. do not disclose memory accessible. However, Wagner et al. disclose memory accessible by the microprocessor for storing data associated with the first and second device, storing data associated with the vehicle, storing vehicle identification data or appliance information (see columns 7-8, lines 63-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining memory accessible by the microprocessor for storing data associated with the first and second device, storing data associated with the vehicle, storing vehicle identification data or appliance information for accurately detect the available power for vehicle and assist a service person to download data information about vehicle for maintenance purpose.

Also as per claims 12-13, Wagner et al. disclose the memory accessible by the microprocessor is used for storing service reminders with at least one of the plurality of devices associated with the vehicle (see columns 12-13, lines 51-54).

As per claims 14 and 17, Slavik, and Parks et al. do not disclose a fault message is downloadable . However, Wagner et al. disclose the memory accessible by the microprocessor is used for storing a fault message, the fault message is downloadable (see columns 8-10, lines 25-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the memory accessible by the microprocessor is used for storing a fault message, the fault message is downloadable for

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monitoring the electrical system of vehicle to increase the efficiency, life span and safety of the system.

As per claims 15-16, Slavik disclose the fault message is associated with the vehicle, and the fault message is associated with at least one of the first or second device (see columns 10-12, lines 25-34).

As per claim 18, Slavik, and Parks et al. do not disclose the memory stored trip information. However, Wagner et al. disclose the memory accessible by the microprocessor is used for storing trip information associated with the vehicle (see columns 8-10, lines 25-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the memory accessible by the microprocessor is used for storing trip information associated with the vehicle for monitoring the fuel level associated with power available for recreational vehicle.

As per claims 19-20, Slavik, and Parks et al. do not disclose the memory stored plurality of service site. However, Wagner et al. disclose the memory accessible by the microprocessor is used for storing a plurality of service site locations, a GPS system, and the microprocessor determines the service site which is closest of the stored plurality of service sites (see columns 5-6, lines 52-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the memory accessible by the microprocessor is used for storing a plurality of service site locations, a GPS system, and the microprocessor determines the service site which is closest of the stored plurality of service sites for assisting the vehicle owner in maintenance and diagnostic faults.

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As per claims 21-22, and 24, Slavik disclose the control system stores a current load profile of the at least one of the first and second devices, and the saved load profile is compared to a current load profile (see columns 4-6, lines 64-12).

As per claims 23 and 25, Slavik disclose a fault signal is produced when the current load profile varies from the saved load profile by a desired amount, and an overcurrent condition associated with the at least one of the first and second devices results in a diagnostic fault signal (see columns 6-7, lines 13-5).

As per claims 26-29, Slavik disclose one of the first and second node is a load control node can monitor power demand from the first and second device, and the control system capable acting through the control node of the control system to disable one of the first or second device when the power demand exceeds a level of available power (see the abstract).

As per claims 30-32, Slavik disclose the control node can monitor demand from the first and second device, the control system capable acting through the control node of the control system to enable or disable one of the first or second device based on a prioritization in anticipation of a condition when the power demand exceeds a level of available power (see columns 10-12, lines 25-34).

As per claim 33, Slavik disclose a first and second power source associated with the load control node, wherein the load control node monitor demand from the first and second device, the load control node capable of enabling the second source of power in anticipation of a condition when the power demand exceeds a level of available power from the first source of power (see the abstract; and columns 2-3, lines 15-2).

As per claim 34, Slavik, and Parks et al. do not disclose a third source of power. However, Wagner et al. disclose a third source of power associated with the load control node, wherein the load control node monitors demand from the first, second, and third device, the load control capable of enabling at least one of the first, second, and third source of power in anticipation of a condition when the power demand exceeds a level of available power from one of the first, second, and third source of power (see columns 3-4, lines 33-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining a third source of power associated with the load control node to provide sufficient power for the vehicle system.

As per claims 35-37, and 39, Slavik, and Parks et al. do not disclose the second source of power includes an inverter, a battery, a capacitor, a fuel cell. However, Wagner et al. disclose the second source of power includes an inverter (see column 4, lines 11-45), the second source of power includes a battery and a capacitor (see columns 4-5, lines 46-25), the second source of power is a fuel cell (see column 5, lines 26-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the second source of power includes an inverter, a battery and a capacitor for providing the maximum amount of power with a given level of fuel flow from the fuel processor.

As per claim 38, Wagner et al. also disclose the microprocessor acting under a set of instruction capable of monitoring battery level and controlling the charging and discharging of the battery (see columns 11-13, lines 4-54).

As per claims 40-41, Slavik, and Parks et al. do not disclose the second and third source of power is a motor generator. However, Wagner et al. disclose the second and third source of

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power is a motor generator (see column 3, lines 33-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the second and third source of power is a motor generator for controlling of power available to the vehicle engine.

Also as per claim 42, Slavik, and Parks et al. do not disclose a schedule of times. However, Wagner et al. disclose the set of instructions for the microprocessor includes a schedule of times during which the motor generator can be enabled (see columns 5-6, lines 52-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the set of instructions for the microprocessor includes a schedule of times during which the motor generator can be enabled to provide security for the access and control of the line power unit.

As per claim 43, Slavik discloses a master control unit (see column 9, lines 20-65), and a display attached to the master node, the display capable of displaying information from the first and second device (see columns 9-10, lines 66-25).

As per claims 45-46, Slavik, and Parks et al. do not disclose an engine node. However, Wagner et al. disclose an engine node for receiving information from the engine of the vehicle, and the information receives from the engine includes fault codes (see the abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining an engine node for receiving information from the engine of the vehicle, and the information receives from the engine includes fault codes for controlling and regulating the amount of power supplied to the electric load circuit of vehicle.

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As per claim 47, Slavik discloses a transfer switch node for receiving information from the first and second device of the recreational vehicle (see columns 2-3, lines 15-2).

As per claim 48, Slavik discloses the information from the first and second devices includes voltages and currents associated with the first and second devices (see columns 3-4, lines 66-63; and column 7, lines 5-51).

As per claim 49, Slavik discloses a battery, wherein the transfer switch node receives battery voltage information (see columns 2-3, lines 15-2).

As per claim 50, Slavik, and Parks et al. do not disclose inverter interface node. However, Wagner et al. disclose a battery and an inverter, the control system includes an inverter interface node which is electrical communication with the transfer switch node receives inverter information (see column 4, lines 11-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the control system includes an inverter interface node which is electrical communication with the transfer switch node receives inverter information to control an emergency stop, shutdown or restart command.

As per claims 51-52, Slavik discloses one of the first and second device include air conditioning equipment (see columns 1-2, lines 55-15). Slavik, and Parks et al. do not disclose a temperature sensor, and a modem. However, Wagner et al. disclose a temperature sensor (see column 17, lines 3-53), and a modem and the control system dials a predetermined number in response to a temperature in the recreational vehicle being beyond a threshold value (see columns 1-2, lines 50-39). It would have been obvious to one of ordinary skill in the art at the

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time the invention was made to modify the teach of Slavik, and Parks et al. by combining a temperature sensor for detecting any fault, overload or overcurrent of the vehicle system.

As per claim 54, Slavik discloses a first and second device associated with the vehicle (see the abstract), and a detector associated with at least one of a first or second device, one of the first or second device include an apparatus for producing a signal based on a condition of the at least one of the first or second device (see columns 3-4, lines 66-63; and columns 10-12, lines 26-34). Slavik, and Parks et al. do not disclose a modem. However, Wagner et al. disclose a modem, and the system dials a predetermined number in response to a condition signal from at least one of the first and second device of the vehicle (see columns 1-2, lines 50-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining a modem for electrical communication between vehicle and host computer.

Also as per claims 55-56, Wagner et al. disclose predetermined number dials a pager with message capability, the system producing a message associated with the condition signal when the system dials the predetermined number (see columns 14-15, lines 33-67).

As per claims 57, and 60, Slavik discloses the first device is a water heater, and an air conditioner (see columns 1-2, lines 55-15).

As per claims 58, and 62-64, Wagner et al. disclose the first device is a motor genset, an inverter, a fuel cell, and an engine for moving vehicle (see column 3, lines 33-57; column 4, lines 11-45; column 5, lines 26-50; and the abstract).

As per claim 67, Slavik discloses one of the first and second device include heating equipment (see columns 1-2, lines 55-15). Slavik, and Parks et al. do not disclose a temperature

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sensor, and a modem. However, Wagner et al. disclose a temperature sensor (see column 17, lines 3-53), and a modem and the control system dials a predetermined number in response to a temperature in the recreational vehicle being beyond a threshold value (see columns 1-2, lines 50-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining a temperature sensor for detecting any fault, overload or overcurrent of the vehicle system.

As per claims 69-70, Slavik, and Parks et al. do not disclose a fault codes, and diagnostic data. However, Wagner et al. disclose the memory accessible by the microprocessor stored a fault code, and diagnostic data associated with at least the first and second devices (see columns 8-10, lines 25-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining the memory accessible by the microprocessor is used for storing a fault message, and diagnostic data for monitoring the electrical system of vehicle to increase the efficiency, life span and safety of the system.

7. Claims 44, and 53, are rejected under 35 U.S.C.103(a) as being unpatentable over Slavik (4,617,472), in view of Goldstein et al. (6,429,019).

As per claim 44, Slavik does not disclose tank level node. However, Goldstein et al. disclose tank level node adapted to monitor the level of at least one tank associated with the vehicle (see columns 3-4, lines 23-8; and columns 4-6, lines 60-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining tank level node adapted to monitor the level of at least one tank associated with the vehicle to protect and optimize the service of a fuel cell catalyst.

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Also as per claim 53, Slavik does not disclose a carbon monoxide detector. However, Goldstein et al. disclose a carbon monoxide detector, wherein one of the first and second device including heating equipment, the system including a modem, and the system dials a predetermined number in response to a carbon monoxide level in the vehicle being beyond a threshold value (see the abstract; and columns 2-3, lines 50-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, and Parks et al. by combining a carbon monoxide detector, and the system dials a predetermined number in response to a carbon monoxide level in the vehicle being beyond a threshold value for controlling the CO level within the fuel cell to protect a CO sensitive catalyst within the cell from CO poisoning.

8. Claim 68, is rejected under 35 U.S.C.103(a) as being unpatentable over Slavik (4,617,472), Wagner et al. (6,055,163), and Park et al. (6,504,339) as applied to claim 40 above, and further in view of Goldstein et al. (6,429,019).

As per claim 68, Slavik, Wagner et al., and Park et al. do not disclose a carbon monoxide detector. However, Goldstein et al. disclose a carbon monoxide detector, wherein the control system disables a motor generator in response to a carbon monoxide level in the vehicle being above a threshold value (see the abstract; and columns 2-3, lines 50-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, Wagner et al., and Parks et al. by combining a carbon monoxide detector, and the system dials a predetermined number in response to a carbon monoxide level in the vehicle being beyond a threshold value for controlling the CO level within the fuel cell to protect a CO sensitive catalyst within the cell from CO poisoning.

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9. Claims 59,61, and 65-66, are rejected under 35 U.S.C.103(a) as being unpatentable over Slavik (4,617,472), Wagner et al. (6,055,163), and Park et al. (6,504,339) as applied to claim 40 above, and further in view of Balch et al. (4,634,887).

As per claims 59 and 66, Slavik does not disclose the first device is a gas tank. However, Balch et al. disclose the first device is a gas tank (see column 7, lines 30-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, Wagner et al., and Parks et al. by combining the first device is a gas tank to provide fuel supply to the power generation of vehicle system.

Also as per claim 61, Balch et al. disclose the first device is a water tank (see columns 6-7, lines 36-29; and columns 9-10, lines 42-31).

As per claim 65, Slavik does not disclose a transmission. However, Balch et al. disclose the first device is a transmission associated with the engine for moving the vehicle (see columns 4-5, lines 38-64; and column 12, lines 11-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Slavik, Wagner et al., and Parks et al. by combining the first device is a transmission associated with the engine for accurately determine the available power supply to the system for moving vehicle.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

. Baker (5,737,168)

. Da Ponte et al. (6,175,217)

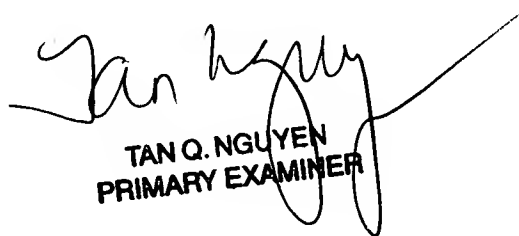
. Welches (6,404,655)

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 703-308-8223. The examiner can normally be reached on M-F (7:30 AM-5:30 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


TAN Q. NGUYEN
PRIMARY EXAMINER

/dt
May 31, 2003